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## Public Service Bonds

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**I**T is a fundamental requirement of a conservative investment that it be founded on a sound and stable business situation. Next to the obligations of municipalities which in effect are a lien on the taxing power of the community, no more sound and stable business situation exists than that of furnishing to the public such necessities of modern life as gas, electricity, street railway service and telephone communication. Water companies are omitted, as private water companies are comparatively few, since this service has been very generally assumed by the municipalities themselves. Notwithstanding the comparatively short history of public service companies, so steady and so ever increasing has been the demand for their products that, from a negligible amount half a century ago the capitalization of public service companies in the United States is now stated to be about fifteen billions of dollars—a figure almost as large as the capitalization of the railroads or of the industrial corporations in the United States.

### PUBLIC SERVICE COMPANIES

*Gas Companies.*—The gas industry is the oldest of the public utility industries in this country, a company having been chartered in Baltimore as early as 1816. Under conditions existing in the large cities gas has become a practical necessity and what the companies have lost in illuminating busi-

ness has been more than compensated for by the increase in the use of gas for fuel purposes. The greater economy in the transformation of fuel into gas and gas into heat places the gas business beyond the reach of general competition in this field from the electric companies, and the greater convenience for heating and cooking purposes places gas beyond the reach of general competition from coal, oil and other kinds of fuel.

*Electric Power Companies.*—The electric light and power industry hardly needs comment, so many and so diverse are the uses to which electrical energy is being put in our modern life. A phase of this great industry which perhaps deserves special mention at this time is the generation of electrical energy from water power. Hydroelectric properties, when well conceived and executed and operating near a good field for the sale of their product, occupy an almost unassailable position in the economic structure of our country. The creation of their product does not entail the consumption of any of the natural resources of the country. On the contrary, it merely entails the development of a natural resource which is otherwise going to waste. While perhaps a collateral issue from the standpoint of public service bonds, it is particularly unfortunate but perhaps understandable, in view of the crisis in world affairs through which we have just passed, that Congress has not enacted legisla-

tion that will make possible the development of undeveloped water powers on the public lands or on navigable streams.

I understand that at the present time there are some 47,000,000 H. P. that are available and less than 4 per cent of this amount has been developed. The nature of the United States government grants which are now obtainable is such that no prudent banker would place his funds or those of his clients in enterprises involving the development of this power on the public lands or navigable streams, but with the strain of the war over it is hoped that our national legislators will speedily enact legislation that will permit the further development, under reasonable restrictions, of this tremendously important natural resource. Of course, even with the most favorable legislation all the large amount of power mentioned above would not be developed, as proximity to power markets and the expense of development are governing factors. If the powers on public lands, however, were developed to the extent of those on private lands it would release nearly 12,000,000 additional H. P. or over twice as much as is now developed from hydro-electric sources in the entire country. The general economic importance of releasing this power is perhaps not generally appreciated or its effect upon the food, fuel and industrial situation, involving as it does irrigation, electro-chemical and electro-metallurgical processes, railroad electrification, pulp and paper manufacture, and general power supply.

*Telephone Companies.*—The old idea that telephone bonds were secured merely by a mass of wire has passed

away. The wires, of course, are just as important to the telephone company as are the rails to the railroad or the mains to the gas company, but they are merely the arteries for the transportation of oral communication—the commodity that the telephone company sells—and without system and expert management they would merely represent so much metal. Whether the country is in the heights of prosperity or in the throes of financial depression the telephone must be employed. Modern business and social intercourse have reached the point where we cannot get along without the telephone. The continuance of the country's growth means a corresponding increase in the growth of telephone business. The nature of the telephone business is essentially a monopoly, for the more complete is the inter-communication furnished the more valuable is the service.

*Street Railway Companies.*—The economic necessity of local general transportation facilities for the larger centers of population cannot be seriously questioned, and it therefore follows that the street railway, in general, is a permanent institution. The increased costs of operation resulting from the war, combined with a general fixed 5-cent rate of fare, have imposed severe hardships on the street railway industry and confronted it with problems for which a permanent solution that is fair to both the public and the street railway owners, in most cases, has not yet been found. This is dealt with in more detail below but as a resumé it is safe to say that, generally speaking, street railways are an indispensable public service and we may count on the American spirit of fair

dealing and coöperation on the part of both the public authorities and the railway owners in arriving at an agreement that will place this industry on the sound financial basis that it must enjoy to enable it to continue to perform satisfactorily its public function.

#### DEVELOPMENT OF PUBLIC UTILITY COMPANIES

The development of the public utility industry to its present established position has been attended by many difficulties, not all of which are common to every company, but at least some of which have been passed through by the average company. These include periods of financial and franchise abuses; cut-throat, competitive periods; the legal tangles of consolidation and merger; the operating problems involved by the continuous improvement in the art; the change from a public-be-damned to a public-be-pleased policy; problems of finance and of educating the bankers and the public regarding their securities; oppression at the hands of new and inexperienced public regulating authorities; and, last of all, the burdens placed upon them by present abnormal operating costs. Having, so to speak, passed through the fire, the public utility business is emerging as a seasoned, time proven and permanently established industry.

#### CHARACTERISTICS OF PUBLIC UTILITY COMPANIES

*Regulated Monopoly.*—It is gradually coming to be recognized that companies providing public service are, in effect, public servants and as greater protection has been thrown around

their operations by public regulating authorities greater limitations have been placed on their speculative earning power. In other words, these companies as a class have been approaching the status of regulated monopolies, which is the logical and the ideal position for them to occupy, both from the standpoint of the service rendered to the public and its inseparable corollary, namely, their ability to raise money to finance the inevitable and steady growth of their business.

*Stability of Earning Power.*—The importance of stable earning power cannot be over-emphasized in connection with the purchase of bonds. The buyer of strictly investment bonds is entitled to a security which is practically free from the elements of uncertainty, as he is loaning his money at a fixed, limited rate of interest and for a specified time and without the speculative possibility of an increase in either income or principal. In other words, he is purely a creditor of the company and not in any sense an owner who may reasonably expect to see an increase of either his principal or income. As above indicated, from the very nature of the service they perform, these industries may be termed "Public Necessity Companies" inasmuch as an adequate supply of light, heat, power, transportation and communication is essential to the health, progress and prosperity of the modern community. For this reason no property offers a better fundamental basis of security than a well managed, thoroughly equipped and conservatively capitalized public utility company controlling the business of a large city or a populous territory. Their earnings, generally speaking, are not subject to the

wider fluctuations of industrial corporations or even of the steam railroads. The nature of their business is such as to make their gross earnings largely independent of general business and industrial conditions. Even through the war the gross earnings of public service corporations continued to increase although, of course, higher costs temporarily made material, and, it is to be hoped, only temporary, inroads on their net earnings. The steady growth in population of this country justifies the belief that the business of public utility companies will continue to increase from year to year.

*Natural Monopoly.*—In addition to the stability of their earning power public service companies differ from other corporations in that they are a natural monopoly and that the service they render is a permanent necessity to the communities served. It has become generally recognized that the nature of their business is such that it is undesirable to have competition and that where competition does exist there is a duplication of plant, etc., which, in the long run, places an unnecessary burden upon the people. The companies operate, as a general rule, under franchises or grants from the communities served, which permit them to use the streets, etc., for the conduct of their business. This fact also places public utility bonds above the class of bonds of industrial corporations which operate under no special franchise and which are at all times open to competition. It is interesting to note that practically every important industry uses electric power and has telephone service, so that, in a measure at least, the earnings of the

electric light and power companies and telephone companies are an operating expense of industrial companies.

#### STATE REGULATION OF PUBLIC UTILITIES

Every state except Texas, Iowa and Delaware has a commission with jurisdiction extending to one or more forms of public utilities. These public service commissions constitute an additional element of protection for the purchaser of bonds of public service companies that come within their jurisdiction. The jurisdiction of commissions such as those in New York, Wisconsin, etc., extends to the approval of security issues, methods of keeping accounts, a general supervisory control over rates charged and service furnished by the companies. Thus these commissions protect the interests of the public served, the companies and the investors in the companies' securities. These commissions generally adopt the policy of discouraging competition where the company already occupying the field is giving good service at reasonable rates. Inasmuch as the commissions control both of the latter, public utility companies, at least in the states where the commissions exist and have the regulatory powers indicated, are becoming more and more strongly intrenched as regulated monopolies.

#### STREET RAILWAYS

The public service companies are just successfully emerging from a very trying period, to which I have already referred. The abnormal conditions resulting from the war have caused the industry in general, and the street rail-

way industry in particular, to be ground between the upper millstone of rising costs of everything that goes into operation and the nether millstone of fixed prices for the service they render.

#### *Rate Regulation*

Rate regulating authorities have been slow to respond to the abnormal cost situation by granting the companies the necessary relief in permitting them to charge increased rates for their product to compensate for the unavoidable increased costs of operation. The owners of this class of property, finding the income over and above operating expenses curtailed and in many cases even approaching the vanishing point, have found themselves in the position where they not only had an unprofitable investment, but where they were not able to give the public the service they should have because the raising of money to finance the constant growth of the business, if not impossible, often could only be accomplished at a cost out of all proportion to the probable return that could be earned on the money.

In this connection, all public utility companies may be roughly divided into two general classes: (1) The class which had its rates specified or which had its rate regulating powers vested in the municipality by franchise contracts with a municipality and (2) the class which had its rates regulated by a public service commission. The former class is the one that has had the most difficulty in convincing the municipality, or the municipally appointed commission, of the absolute necessity of commensurate increases in income to offset the abnormal increases in operating expenses—increases that must be

sufficient to produce enough net revenue to pay a reasonable return on the capital invested in the business, thus to make possible the acquiring of new capital as needed to finance extensions and thus insure to the public the service which it demands and to which it is entitled. The street railway industry is the most conspicuous example, owing to the fact that street railway franchises obtained from municipalities have, as a rule, provided a maximum fare, usually 5 cents. In any event, for a long period of years the nickel has become fixed in the public mind as the proper price for a street railway ride, no matter what its length, and it has been extremely difficult to educate the public as to the merits of, and the legitimate reason for an increase in street railway fares. This question has almost always become mixed up in politics and, without regard to the justice of the case, politicians have been slow to agree to raising the cost of street railway service to the riding- and voting-public.

#### *Increased Cost of Operation*

Added to this low rate of return is the fact that street railways have been more affected by the abnormal costs of producing their service than any other branch of public utility industry, due, primarily, to the fact that a larger proportion of their operating expenses consists of payments to labor. So reluctant have the municipal authorities been to grant the necessary increases in fares that, as a result, it is authoritatively stated, over 16 per cent of the street railway mileage in the United States is either in the hands of receivers or has been abandoned as junk. The deplorable state of this

industry has assumed nation-wide importance to such an extent that the President of the United States has appointed a Federal Electric Railway Commission to investigate the street railway situation and to make recommendations for the guidance of those who are in a position, and whose duty it is, to correct the flagrant injustice that is being done.

#### *Street Railway Securities*

So heavy has been the cloud that has hung over street railway securities as a class that it has been practically impossible for even the more fortunate companies that have received reasonable treatment in this matter to obtain additional funds at any reasonable rate. However, street railway lines serving nearly 500 cities and towns (nearly every state being represented) with an aggregate population of over 32,000,000 have obtained increases in fares in amounts ranging from additional charges for transfers to 10 cent fare and zone fare systems. Thus it will be seen that the economic necessity of increases in street railway fares to meet increased cost of operation has been generally recognized and it is reasonable to assume that it is merely a matter of time before it will be universally recognized.

#### *Rate Regulation and Valuation*

Owing to the public nature of their business and the fact that they are natural monopolies, the public mind is arriving at the point of view that the solution of the difficulties of the street railways lies along the lines of valuing the properties of the companies and then permitting them to charge such variable rates of fare as will enable

them to earn a reasonable return, under changing conditions, on the capital invested in the business. The opponents of this general plan contend that it vitiates the interest of the management in keeping operating expenses down since the owners of the property are assured of a rate of fare that will yield them a return on their investment irrespective of operating expenses. Of course, the answer to this is that in the cases where this general plan has been adopted complete provision is also made for supervision of the operation of the whole arrangement by a regularly constituted city authority, part of whose duty would be to prevent such abuses.

#### *Sliding Scale of Fares*

This principle has been successfully adopted in the city of Cleveland where the street railway franchise provides for a sliding scale of fares and machinery for automatically changing them so as to permit the company to earn its operating expenses, fixed charges and 6 per cent on its stock. This example is frequently pointed to by regulating bodies as a conclusive argument that a 6 per cent rate of return is a reasonable one and attractive to capital, inasmuch as the stock of the company enjoys an active market in ordinary times at around par. This, however, is not a sound premise as stocks of Ohio corporations enjoy exemption (having an average value of about  $1\frac{1}{2}$  per cent) from local taxation and, in addition, this particular stock has been made available for the investment of trust funds in that state.

The recent experience of the city of Toledo, where the people voted to oust the railway property from the city and

the railway promptly complied by removing its cars to another state, is an interesting indication of the essential nature of street railway transportation to a large modern city. So great was the inconvenience, discomfort and loss of business arising from the absence of street railway transportation facilities—motor transportation proved wholly inadequate—that it was only a few weeks before the city was glad to make it legally possible for the company to come back on the same basis of fares that had originally aroused the city's ire and caused the passage of the Ouster Ordinance and, in addition, with practical assurance from the city that it would work out the situation satisfactorily.

#### OTHER PUBLIC UTILITIES

The difficulties of the street railways have been shared by the other utilities only to a limited extent. Labor costs of the latter are not proportionately so great and there is no absolute price for their commodity fixed in the minds of the public as in the case of the fetish of the 5-cent street railway fare. Furthermore, rate regulation in the case of gas, electric and telephone companies is more generally in the hands of state commissions than is the case with the street railways. These commissions have responded more quickly to the necessities of the utilities than have the municipalities. The distinction in this respect between public utilities in general and the street railways is obvious to all those familiar with the respective industries and the investment market has generally recognized it, as is evidenced by the more satisfactory market that prevails for other public utility bonds than the market, if

any, for even the best grade of street railway bonds.

#### BOND ISSUES ON PUBLIC UTILITIES

##### *Protection to Bondholders*

It is apparent that even the strong business situation furnished by prosperous public utility companies would avail the bondholder little if his lien on the property and right to enforce the payment of his principal and interest were not properly safeguarded by a properly and conservatively drawn mortgage. The mortgage is the instrument that connects the bondholder to the property and its terms must be such as to protect him and his rights in every reasonably conceivable respect. Elaborate care should be exercised in the preparation of the mortgage to the end that it will completely fulfill its functions and that it will contain no loophole that might vitiate the strength of the document and the protection that it should afford the bondholders.

##### *Amount of Bond Issue*

One of the primary considerations that the investment banker has in mind in determining the amount of a bond issue on a public utility property is the duplication value of the physical property to be mortgaged after making the proper allowances for obsolescence, depreciation, etc. In view of the attitude of regulating authorities to the effect that the proper basis for determining the earning capacity of public utility properties is the value of their property, this becomes a consideration that no conservative banker can afford to ignore, but the investment banker has a further concern than the

immediate relation of the amount of bonds to the value of the property.

#### *Sinking Fund*

While, of course, there is no such thing as guaranteeing management, the investment banker can at least require that the mortgage contain covenants looking toward the maintenance of the property in a state of operating efficiency and adequate provision for depreciation, and it is also generally customary to include in the mortgage a sinking or improvement fund. No far-sighted public utility operator would agree to a bond issue that did not carry with it the possibility of issuing additional bonds under the same mortgage with reasonable restrictions, and so provide himself with a means of financing a substantial part of his future requirements. The preservation of the proper relation between property and bonds, and earnings and bond interest is provided for by the requirement that additional bonds may be issued only for a percentage, say 80 per cent, of the cash cost of permanent extensions and additions to the property when the net earnings are equal to at least twice the interest on all the bonds outstanding, together with those proposed to be issued. Of course, these requirements are subject to variation to meet the needs of specific cases, but the principle remains the same.

While the banker has insisted that the mortgage provide for a sinking fund to retire a certain amount of bonds each year and thus improve the relation between bonds and property value, the owner has found himself in the position of putting cash into a sinking fund which then goes into the market and buys bonds for cash, usually at a price

somewhat above the general market therefor. At the same time growing companies have frequently required money to finance the legitimate expansion of their business, which has meant that they have had to sell bonds to their bankers at a price sufficiently below the general market to pay the bankers for their services. Thus the company has lost the difference between the price paid for bonds purchased by the sinking fund and that received by the company for bonds sold against additions to property. This loss has been obviated by the adoption of the sinking or improvement fund, which provides that the company may either use the funds arising therein for the purchase of bonds or may expend such funds on property which might otherwise have been made the basis for the issue of bonds. This compromise at least partially accomplishes the primary result desired by the bankers; namely, the improvement of the relation of the property to the bonds, although it is not so desirable from the standpoint of the purchaser of the bonds inasmuch as it deprives him of the periodic special market created for the bonds by the sinking fund.

#### *General Escrow Requirements*

In connection with the general question of the size of authorized issues, so rapid has been the growth of the successful public utility companies that authorized issues provided by mortgages of even a few years ago which seemed entirely adequate to care for the bond requirements of the company for the period of the mortgage, say twenty-five or thirty years, have been found to be entirely in-

adequate, necessitating either the creation of new junior mortgages entailing a higher cost of money for the company or the refunding of the old obligations and the issue of a new, larger authorized issue to take their place, at best an expensive operation from the standpoint of the company. Thus we now have many of the larger companies issuing mortgages with an authorized issue of fifty, seventy-five or one-hundred million, or sometimes even without a definite limit to the amount of bonds that may be certified thereunder, subject, of course, to limitations along the lines indicated and the limitation of the life of the mortgage.

#### *Ratio between Bonds and Stock*

In connection with the general escrow requirements which do not permit the issuance of bonds beyond a reasonable percentage of, say 75 per cent or 80 per cent of the cost of extensions and additions, it should be borne in mind that adequate and workable means should be provided for the company to accomplish its junior financing. A well balanced capitalization should show a conservative ratio—say 3 to 2—between bonds and stock. This is sound business from the standpoint of the issuing corporation as it facilitates future financing. That no company should attempt to finance itself entirely on borrowed money secured by a mortgage is so obvious that it hardly needs comment but, nevertheless, many corporations have endeavored to do this and have found bankers who were willing to purchase their bonds. A large part of the past financial difficulties of the steam railroads as well as some of the public

utilities has been caused by disregarding this simple principle.

Notwithstanding the fact that public utility operation and finance have gradually been standardized, each industry and, in fact, each company presents problems that must be solved satisfactorily before sound securities can be issued thereon. The properties must be subjected to searching examinations from business, technical, accounting and legal standpoints and the mortgage drawn under the supervision of experienced experts and attorneys. The majority of investors must of necessity rely largely upon their bankers in making investments since however familiar an individual may be with investments in general, it is usually not feasible, if not impossible, for him to investigate all the numerous legal and technical questions bearing upon the safety of any particular bond.

#### CONCLUSIONS

The foregoing leads to the logical conclusion that the classes of public utility business discussed present, from an intrinsic and economic standpoint, a sound and stable basis for the issuance of safe investment bonds, especially when the company falls into the class of the larger and more seasoned properties and when the bond issue has been surrounded with proper safeguards. At the present time even the best of public utility bonds are selling on a very much higher interest basis—and at correspondingly lower price—than their intrinsic security would justify in ordinary times, but this temporary market condition, which is common to practically all investment securities, cannot be con-

sidered in the light of a reflection on the intrinsic security of the issues involved. This is rather a question of general market conditions to which must be added the probability that

the investing public has not as yet fully regained the confidence in public utility bonds that the strength of their intrinsic position justifies.